

REMARKS

Claims 1-45 are pending in the application. Claims 2-5 and 24-45 are hereby cancelled. The status of the remaining claims 1 and 6-23 is as follows.

Claims 1, 6-9, and 12-13 have been rejected under 35 U.S.C. § 103(a) as being obvious over United States Patent No. 4,115,494 ("*Valyi*") in view of United States Patent No. 4,143,453 ("*Taluba*").

Claims 10-11 and 14-23 have been rejected under 35 U.S.C. § 103(a) as being obvious over *Valyi* and *Taluba* in view of United States Patent No. 6,403,003 ("*Fekete*").

Applicant traverses each of the aforementioned rejections and maintains that, as explained hereinafter, remaining claims 1 and 6-23 as amended herein are patentable over the prior art.

1. Claims 1, 6-9, and 12-13 Are Patentable Over *Valyi* In View of *Taluba*.

Valyi's and *Taluba's* processes differ fundamentally from those of claims 1, 6-9, and 12-13 as amended herein and each of those claims are patentable over *Valyi* and *Taluba*, whether the references are taken alone or in any combination.

Valyi injects a parison into a form mold, releases the parison from the form mold, and transfers the parison to another blow mold in order to blow mold the final part. In *Valyi*, the blow mold is a split mold that allows the blown object be released from the blow cavity without any undercut along the direction of the released part. The blow core 15 and parison 16 are located within blow mold 23 and that the parison is expanded in conformity with the cavity of blow mold 23. See *Valyi*, column 4, lines 18-38.

Taluba discloses blow molding a hollow appendage comprising elastomer material in such a manner that it is provided with an inwardly folding lip having a semiannular groove. The lip mates with a flange on the primary body. In the particular embodiment disclosed, the two halves of a doll's head are molded to include an annular lip at the neck constructed to fold inwardly along an annular groove when the two halves of the mold come together. An external semi-annular projection and a semi-annular indentation are provided on the face half of the lip, which are not matched on the rear

half. The lip is constructed in its inwardly folded position so that its upper edge mates with an annular flange on the doll's body, securing the head thereto. *See Taluba*, column 1, lines 43-58.

Neither *Valyi* nor *Taluba* disclose processes in which a parison with a substantially uniform thickness is blown against the interior surface of the blow mold to form a hollow doll head having an opening for removing the interior core, wherein the diameter of the opening is substantially narrower than the diameter of the core to pass through the opening, and wherein a second mold cavity vacuum pressure ranges from about -7 psig to about -14.5 psig, a compressed gas is injected into a second mold at pressures varying from about 80 psig to about 1,000 psig, the parison injection station temperature is from about 150°C to less than about 300°C, compressed gas is injected into a second mold at a temperature of from about 30°C to about 40°C, a vacuum is drawn upon a first mold cavity for about three to about ten seconds prior to the end of an elastomer injection period, an elastomer is injected into a first mold cavity over a period of from about 0.2 to about 6 seconds, and a parison is cooled and dispersed within a second mold in about 5 seconds to about 90 seconds.

Further, neither *Valyi* nor *Taluba* disclose processes to make a doll head that has a hair line forming a substantially continuous circle extending around the top of the head, wherein a first mold interior core defines a cavity in the shape of the portion of the hollow doll head below the hair line.

Prior to the effective filing date of claims 1, 6-9, and 12-13, there was no suggestion or motivation that would have led those of ordinary skill in the art to modify and combine the disclosures of *Valyi* and *Taluba* to arrive at the invention of those claims nor was there a reasonable expectation that such modifications and combinations would prove successful.

Taluba does not suggest that *Valyi's* mold stations could be reconfigured to provide: (1) a first mold interior core which defines a cavity in the shape of the portion of a hollow doll head below the hair line; and (2) a second mold comprising an exterior

mold front section, the rear section of the first mold, and an interior core, wherein the exterior mold front section and the rear section of the first mold exterior sections are oriented latitudinally relative to one another and wherein the exterior sections of the second mold are spaced apart from the interior core to define a cavity in the shape of the entirety of the doll head. Nor does *Valyi* suggest that *Taluba's* pair of molds (*see, e.g., Taluba*, column 3, lines 3-12 and Figure 1A) could be reconfigured in such a manner.

Therefore, even if it were proper to combine *Taluba* and *Valyi*, the combination would lack limitations of the pending claims. *See Hybritech Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 231 U.S.P.Q. 81 (Fed. Cir. 1986), *cert. denied*, 480 U.S. 947 (1987) (obviousness must be assessed by analyzing the claimed invention when taken as a whole, rather than by focusing on the obviousness of particular substitutions and differences; claim limitations cannot be ignored in assessing obviousness).

Additionally, Applicant understands that in both *Valyi* and *Taluba*, the parison disperses (at least in part) within the mold cavity by force of gravity before the parison is blown to conform to the shape of the cavity. In contrast, processes of the claimed invention do not rely on gravitational dispersion of the parison. Applicant believes that the claimed invention offers the additional advantage of enabling horizontal parison injection.

Accordingly, claims 1, 6-9, and 12-13 are patentable over *Valyi* and *Taluba*, whether those references are taken alone or in any combination.

**2. Claims 10-11 and 14-23 Are Patentable Over
Valyi and *Taluba* In View of *Fekete*.**

Fekete discloses an injection molding process which uses a mold that includes exterior mold parts and an interior core part, wherein the exterior mold parts are spaced apart from the interior core to define a cavity in the shape of the hollow part to be formed. A thermoplastic elastomer is injected into the mold cavity to form a hollow head. The head has an opening for removing the interior core, but the dimension of the core is larger than the dimension of the opening through which the core must be removed. After the head is injection molded, the exterior mold parts are opened to release the head and

interior core, and then the interior core is removed from the head by extracting it through the opening in the head. *See Fekete*, column 1, lines 33-49.

Optionally, in *Fekete*, air in the mold at the beginning of a mold cycle may be removed from the mold by means of a vacuum assist coordinated with the injection of the elastomer composition. The vacuum assist can be applied for about the last second of the injection period, or it may be first applied after the end of the injection period. Applying the vacuum assist too early in the injection period may result in overly large cell spaces within the molded closure, yielding an overly spongy product. Failure to use a vacuum assist may result in increased cycle times. *See Fekete*, column 8, lines 49-58.

Fekete's process can be used to make a doll head without an observable part line. When the head is injection molded, a part line is created at the junction of two exterior mold halves. The part line extends in a continuous line around the top of the head above the ears. Hair-material is rooted to the top of the doll head above and below the part line with a sufficient density such that the part line is not observable to an ordinary observer holding the doll at arms length. *See Fekete*, column 6, lines 51-61.

Per *Fekete*, to limit the amount of stretching and/or the amount of force required to extract the core from the toy part, it may be desirable to use, instead of a single core, a multiple-piece interior core assembly such as depicted in Figures 1-4 of the reference. *Fekete* indicates that for thermoplastic elastomers having a hardness below 40 Shore A, a single core may be used with an undercut ratio up to about 3. For harder materials, with a hardness above 40 Shore A, a single core may be used with an undercut ratio up to about 2. *See Fekete*, column 7, lines 60-67-column 8, lines 1-12. *Fekete* defines undercut ratio as the ratio of the major hollow dimension over the opening dimension through which the core is removed. *See Fekete*, column 8; lines 4-7. According to *Fekete*, there is no limit on the largest undercut ratio that would work with his process. *See Fekete*, column 5, lines 20-28.

While *Fekete* disclosed that a vacuum assist could be coordinated with the injection of the elastomer composition, he did not describe drawing a vacuum on, and injecting compressed gas into, a second mold at a blow station to disperse a parison

relatively evenly, and with a substantially uniform thickness, against the second mold cavity interior surface to form a hollow doll head in accordance with each of the limitations of claims 10-11 and 14-23.

As explained above, even if it were proper to combine *Taluba* and *Valyi*, the combination would lack essential limitations of the pending claims. Similarly, even if *Fekete* could be combined with *Taluba* and *Valyi*, the resultant combination would still not provide the mold configuration and operating parameters that constitute limitations of claims 10-11 and 14-23. (While neither reference has been asserted against the remaining pending claims, United States Patent Nos. 6,733,716 ("*Belcher*") and 2,702,411 ("*Winstead*") do not refute the nonobviousness contentions asserted herein.¹)

Additionally, Applicant's claimed invention offers advantages over the prior art that further support a finding of nonobviousness. In the processes of claims 10-11, and 14-23, the core to neck opening ratio can be as low as two, which results in a head to neck opening ratio up to six. The location of the parting line is a matter of tool structure in the processes of claims 10-11 and 14-23; the claimed processes can make a doll head with circular split line at any desired location above the core. Thus, the processes of claims 10-11 and 14-23 are well-suited for use with thinner and more flexible elastomeric materials.

Accordingly, *Fekete* does not disclose or suggest the limitations of claims 10-11 and 14-23 which are missing from *Valyi* and *Taluba* and there is no reasonable basis to believe that those of ordinary skill in the art as of the effective filing date would have modified and combined *Valyi*, *Taluba*, and *Fekete* to arrive at the processes of claims 10-11 and 14-23 as amended herein.

¹ *Belcher* discloses blow-molding PET bottles that have integral handles. *Winstead* discloses embossing thermoplastic materials. As neither *Belcher* nor *Winstead* disclose a process for making a deformable, hollow thermoplastic doll head in accordance with the pending claims, the fact that those references may disclose overlapping process variable ranges in a different context is immaterial insofar as obviousness is concerned. See *Hybritech, supra*.

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Application No.: 10/618,985
Filed: July 14, 2003
Page 14 of 14

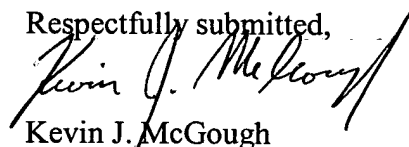
Docket No. J003US

3. Summary.

For the reasons explained above, each of claims 1 and 6-23 as amended herein are patentable over *Valyi*, *Taluba*, and *Fekete*, whether those references are taken alone or in any combinations.

Accordingly, Applicant respectfully request that the rejections of claims 1 and 6-23 be withdrawn and that all of those claims be passed to issue.

Respectfully submitted,



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Date: December 20, 2005